

Commercial Fishing Crew Demographics of the North Pacific: 1993 - 2003

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INTRODUCTION



METHODS

- **DATA**

1. **Alaska Dept of Fish and Game (ADF&G)
Commercial Crewmember License Database**

(N = 272,145 annual license holders; 1993 – 2003)

**All state, majority of federal fisheries

2. **US Coast Guard Search and Rescue Vessel
Sample**

(N = 56 vessels; 180 individuals; 1988 – 2004)

METHODS

- **ADF&G DEFINES CREWMEMBERS:**

1. Person who fishes or handles gear
2. Vessel cook
3. Vessel engineer

***NOT* crewmembers**

- Processing workers
- Vessel guests
- Gear Operator Permit Holders (Alaska)

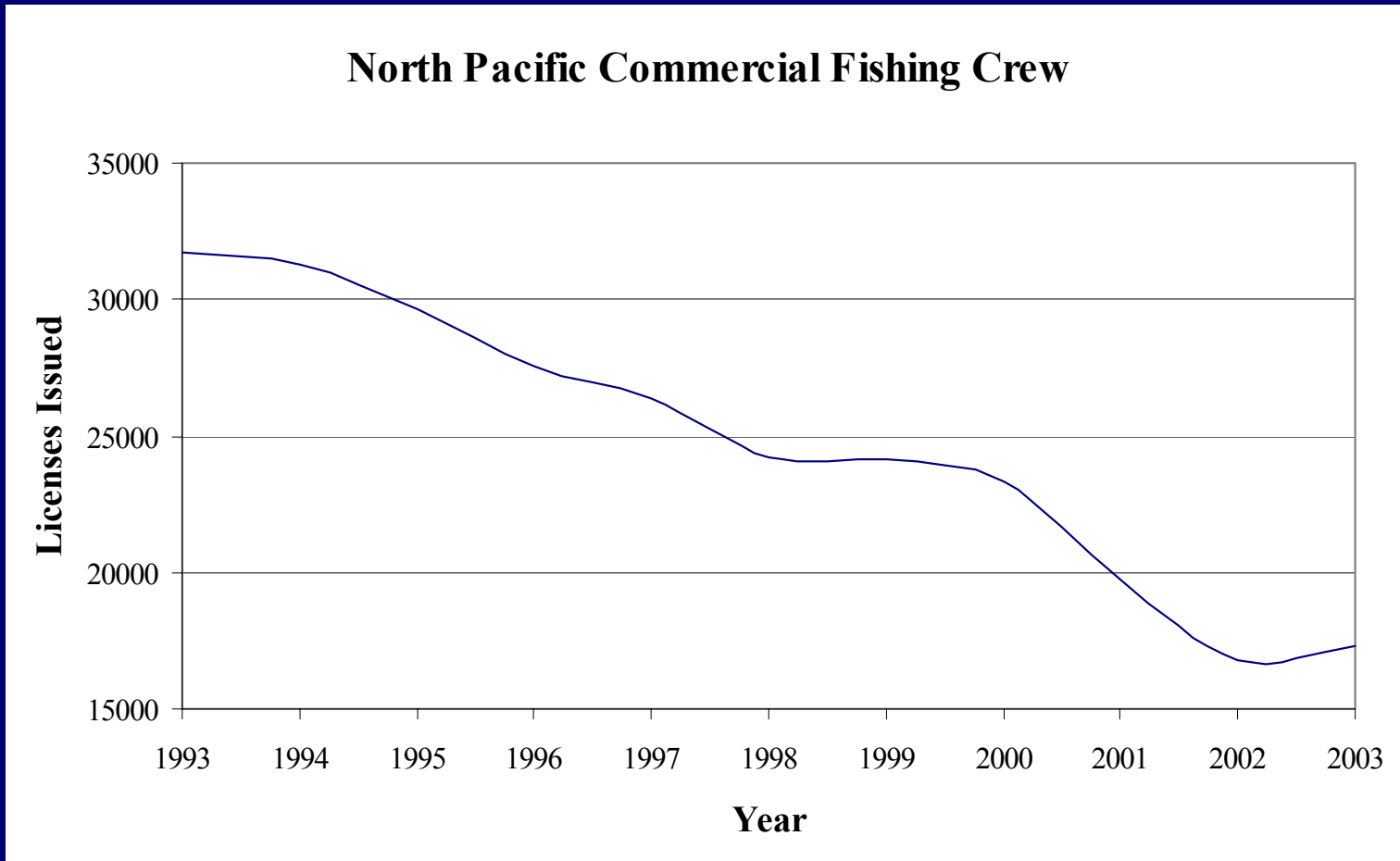
METHODS

- **DEMOGRAPHIC FIELDS**

- Total Population
- License Longevity
- Age
- Gender
- Citizenship & Country
- Alaska Residency
- Geographic Distribution
 - State and Community



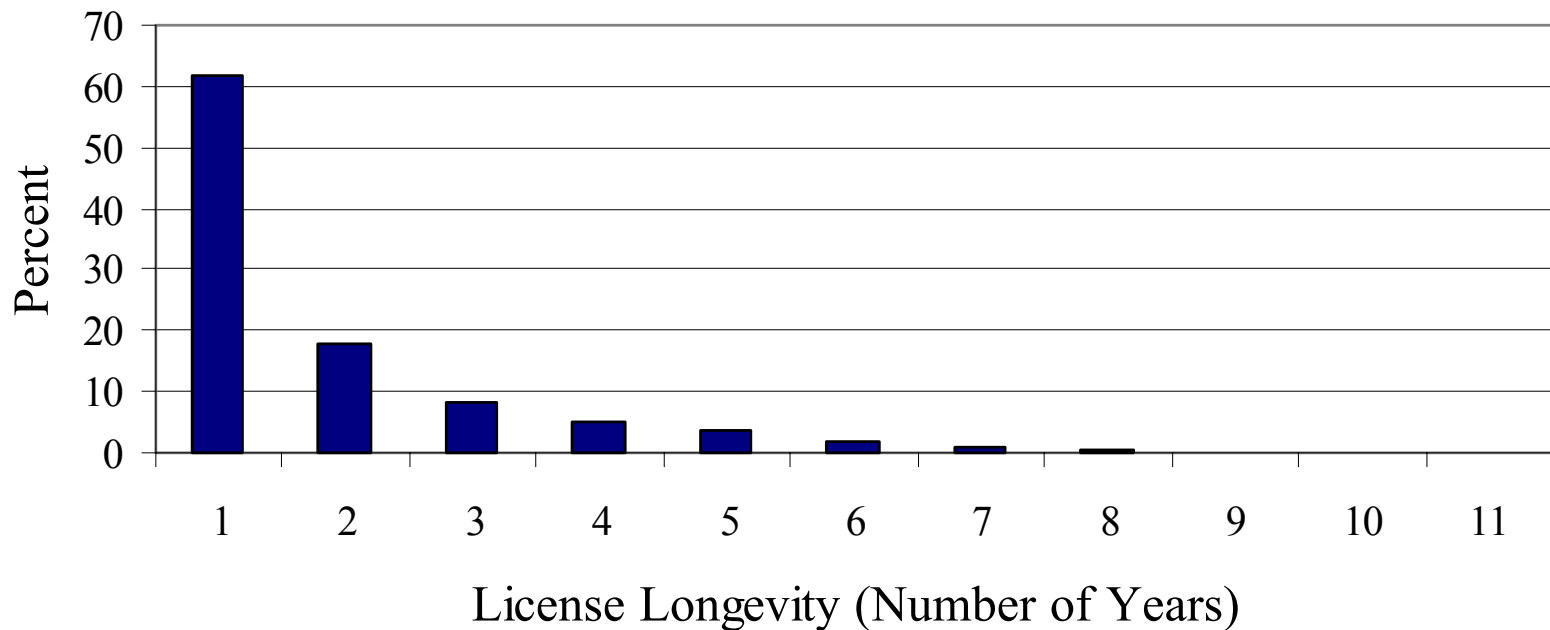
RESULTS: TOTAL POPULATION



- The population of crew members has shrunk by ~ 46% in the last decade

License Longevity

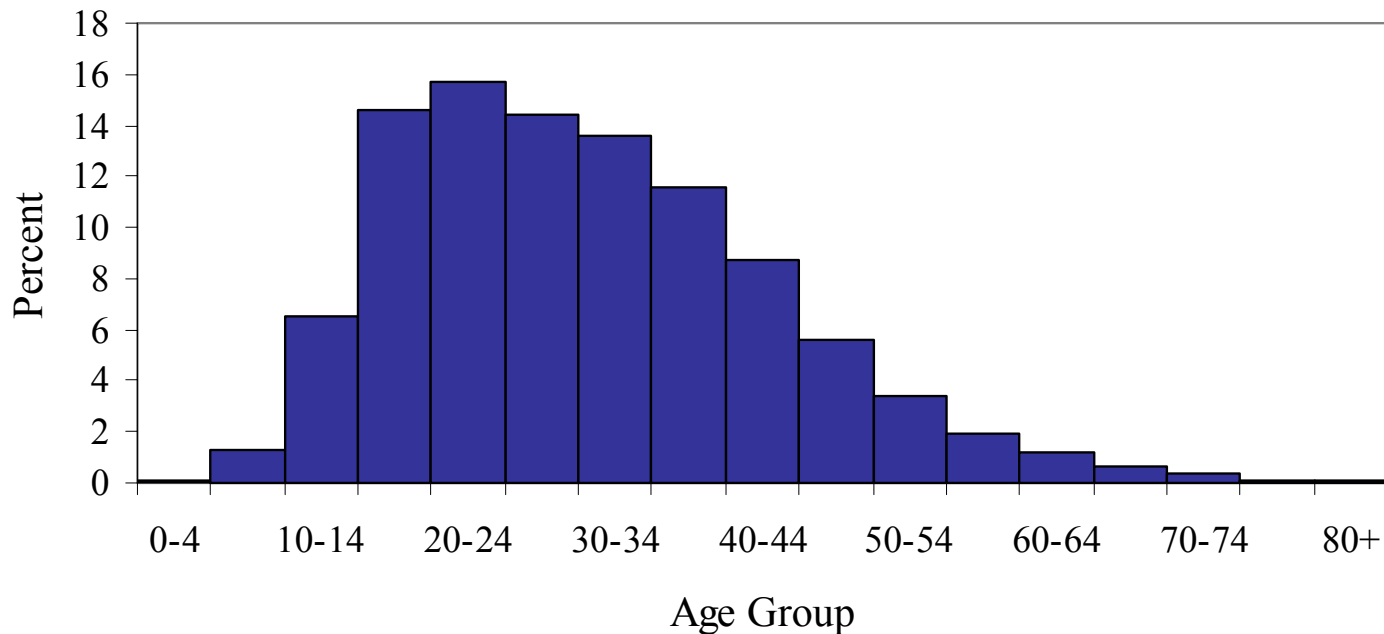
North Pacific Crew Member License Longevity



- Average crew member holds license for 1.8 years
- 20% hold license for 3+ years; Only 7% for 5 or more years

AGE

**Crew Member License Holder Age Distribution
1993 - 2003**



Mean Age is 30.2 years (N = 264,685; s.d. = 12.7 years)

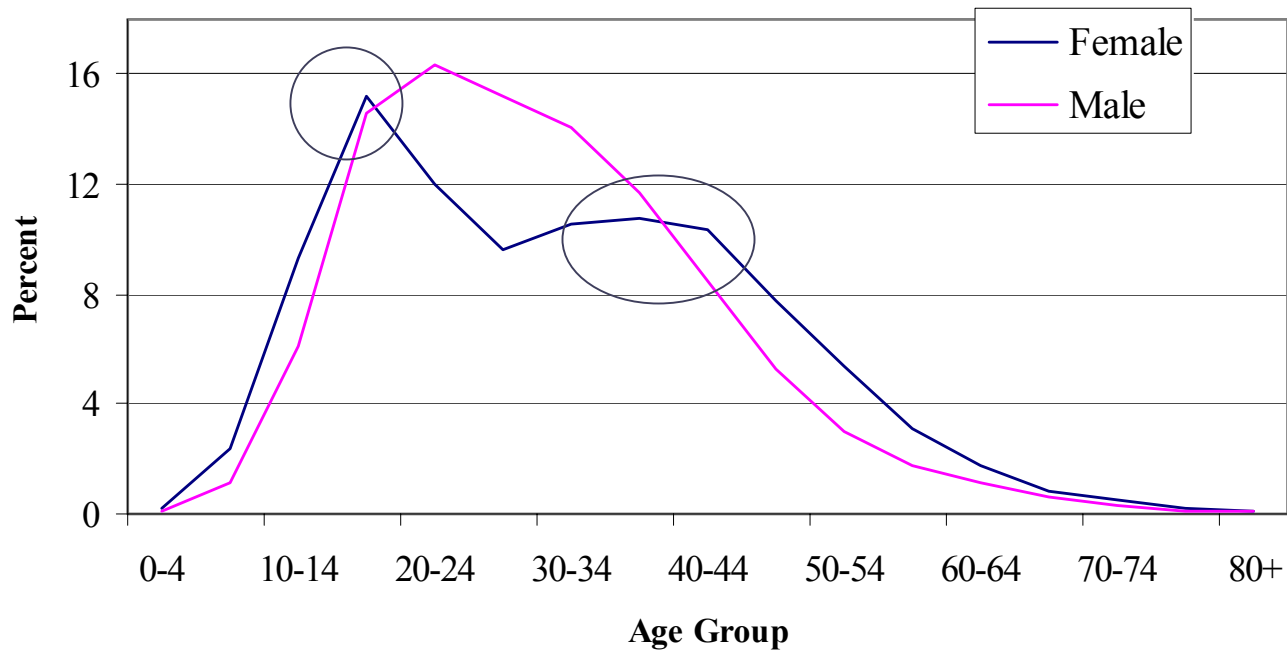
Min(1993) = 29.8 years

Max (2003) = 30.7 years

Significant difference at $p < 0.001$

GENDER & AGE

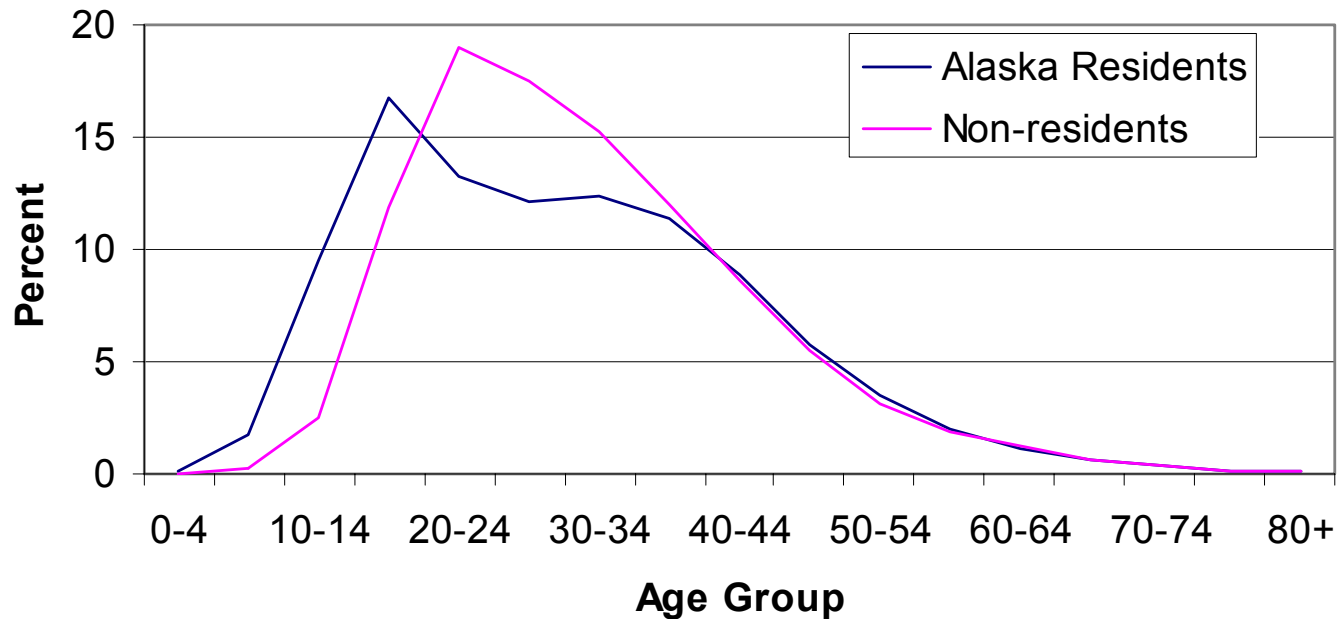
Crewmember Age Distribution 1993 - 2003



- **Mean Age** _{Women} = **31.3 years** (N = 35,915; s.d. 14.6 years)
- **Mean Age** _{Men} = **30.0 years** (N = 226,606; s.d. = 12.4 years)
- **Statistically significant at $p < 0.001$**

RESIDENCY & AGE

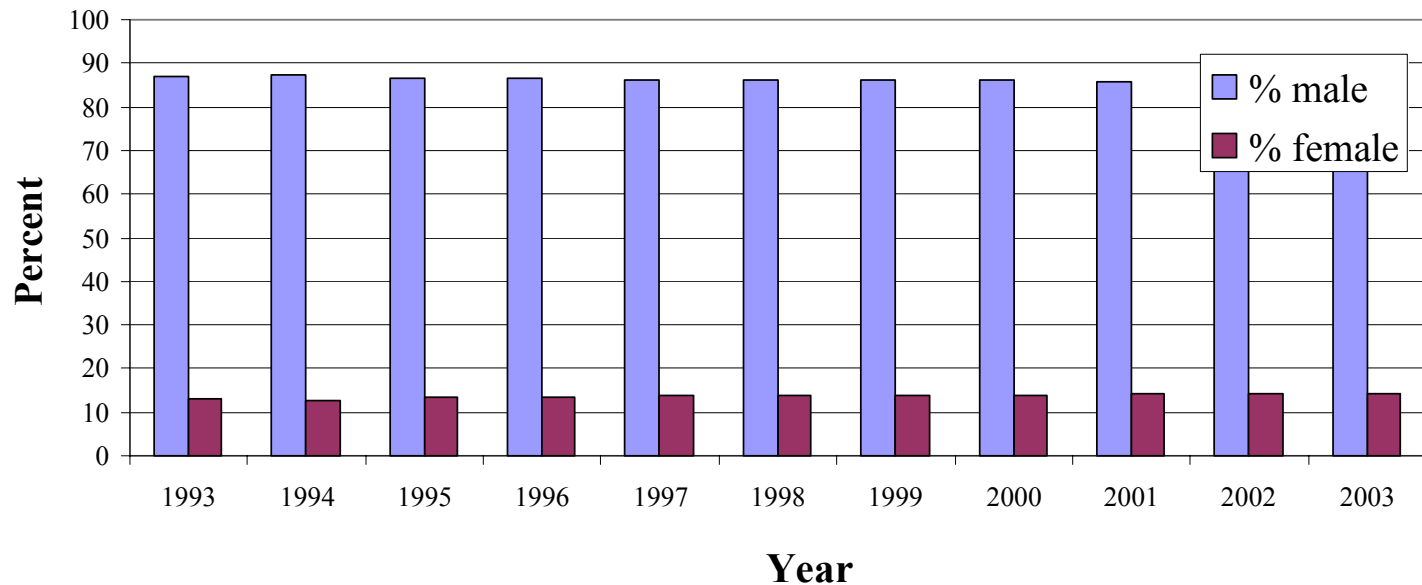
Crew Member Age Distribution 1993 - 2003



- **Mean Age** _{Ak Residents} = **29.5 years** (N = 150,015; s.d. 13.3 years)
- **Mean Age** _{Non-residents} = **31.2 years** (N = 113,917; s.d. = 11.7 years)
- **Statistically significant at $p < 0.001$**

GENDER

**Gender of Crew Member License Holders
1993 - 2003**

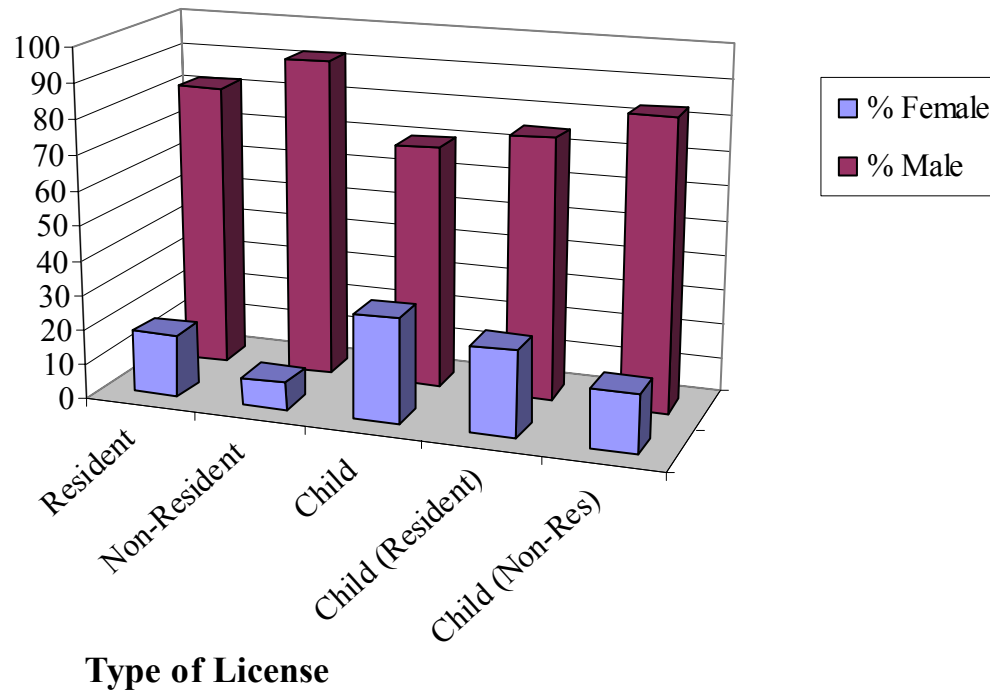


~ 9 to 1

~ 1.4% increase in percent of female crew members over study period

GENDER & LICENSE TYPE

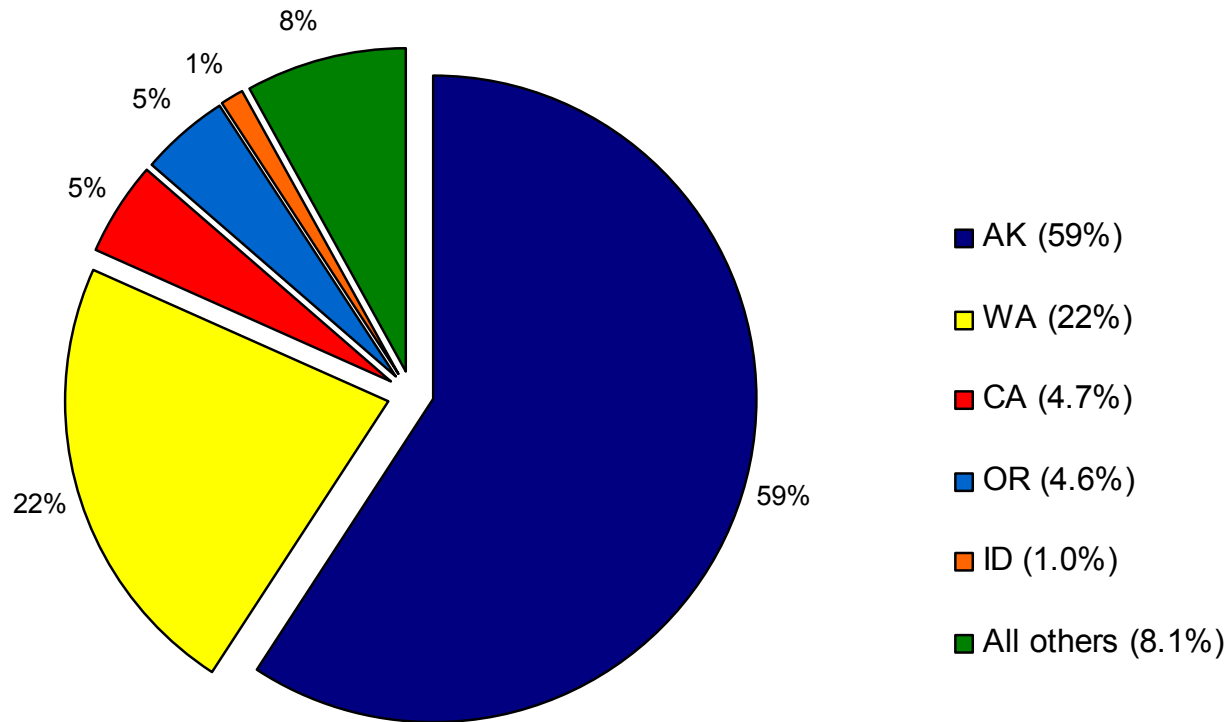
**Gender Distribution of Types of Crew Member Licenses
1993 - 2003**



- More young crewmembers are female (30%)
- The lowest proportion of female crewmembers are non-residents (7.9%)

Geographic Distribution: STATE

Distribution of Crew Licenses 1993 - 2003



Geographic Distribution: PLACE



Overall Rank	Per Capita Rank ^a	City/Village	State	No. of Licenses	Population ^b
1	203	ANCHORAGE	AK	16,205	260,283
2	30	KODIAK	AK	13,504	6,334
3	238	SEATTLE	WA	10,855	563,374
4	29	HOMER	AK	8,451	3,946
5	99	SITKA	AK	7,523	8,835
6	40	PETERSBURG	AK	5,904	3,224
7	109	KETCHIKAN	AK	5,188	7,922
8	163	JUNEAU	AK	4,919	30,711
9	35	DILLINGHAM	AK	4,760	2,466
10	41	CORDOVA	AK	4,477	2,454

Geographic Distribution: PLACE



Per Capita Rank ^a	Overall Rank	City/Village	State	No. of Licenses	Population ^b
1	175	POINT BAKER	AK	236	35
2	192	ELFIN COVE	AK	206	32
3	94	CHIGNIK	AK	504	79
4	77	ILIAMNA	AK	596	102
5	81	CHIGNIK LAG.	AK	570	103
6	76	SELDOVIA	AK	612	144
7	99	EGEGIK	AK	487	116
8	143	P. ALEXANDER	AK	312	81
9	111	LARSEN BAY	AK	416	115
10	160	CLARK'S PT	AK	270	75

PLACE: Change Over Time

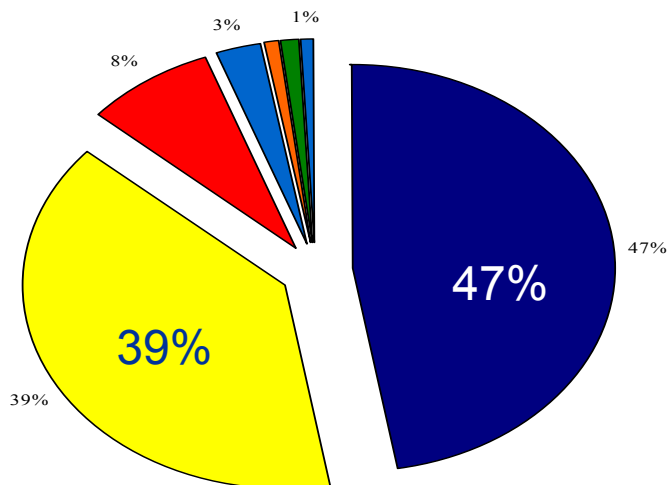
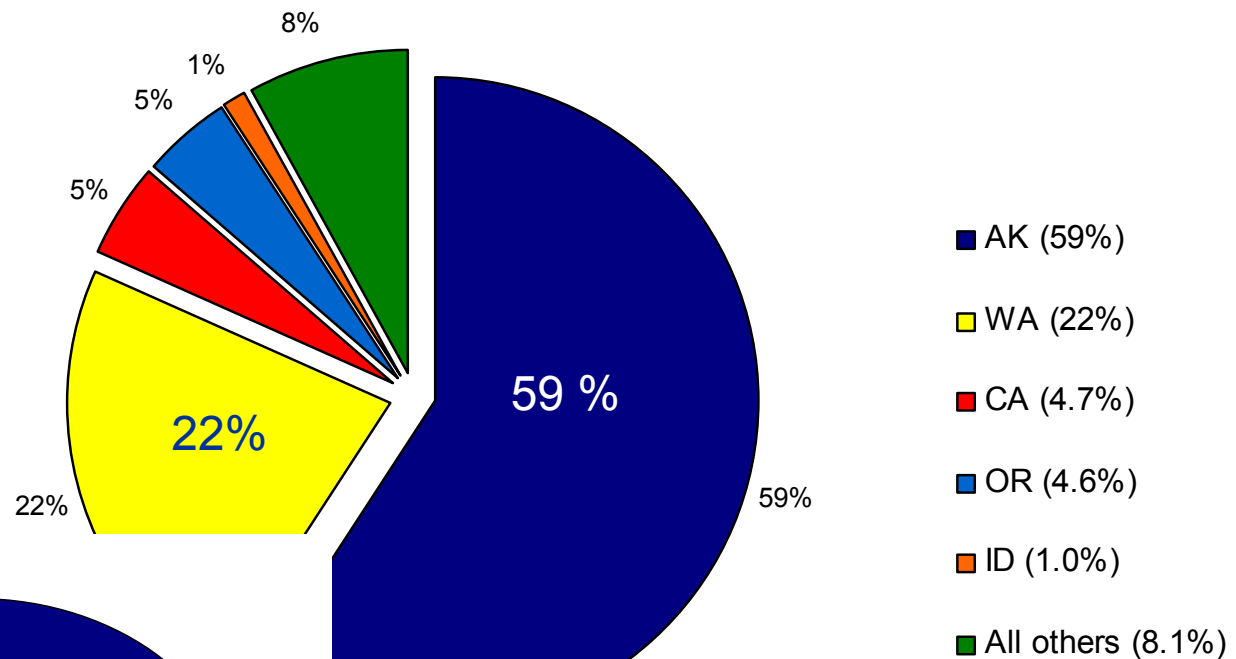
City/Village	State	Mean Annual Change	Mean % of Total Licenses
TOGIAK	AK	+ 0.046	0.49
PETERSBURG	AK	+ 0.035	2.2
CORDOVA	AK	+ 0.030	1.7
SHORELINE*	WA	+ 0.030	0.18
MARSHALL	AK	+ 0.028	0.19
JUNEAU	AK	- 0.051	1.8
KODIAK	AK	- 0.052	5.0
ANCHORAGE	AK	- 0.053	5.1
BETHEL	AK	- 0.11	1.1
SEATTLE	WA	- 0.16	3.9

Search and Rescue Vessel Sample

- **Validity test of ADF&G data**
- **Methodology test for export to other regions**
- **No significant differences found:**
 - Age
 - Gender
 - Three primary cities: Anchorage, Kodiak, Seattle
- **Potential Biases**
 - State Distribution
 - Differ by region

Geographic Distribution: STATE

Distribution of Crew Licenses 1993 - 2003



A Typical Crewmember is:

- Male
- About 30
- Resides in Alaska
- Holds a crew job for 1 or 2 years



Closing Thoughts

- Crew - large portion of the harvesting sector
- Data gaps (NS 8, community profiling)
- Vessel sample methodology
- Ethnographic depth



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